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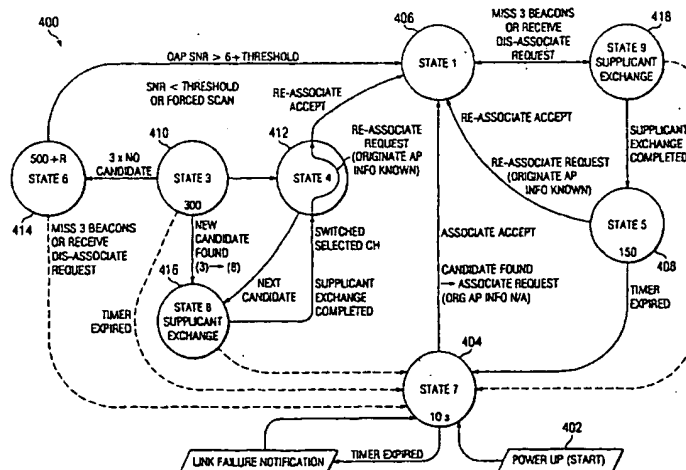
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
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[Continued on next page]

(54) Title: PICO CELL WIRELESS LOCAL AREA NETWORK (WLAN)



(57) Abstract: A pico cell wireless LAN and pre-emptive roaming algorithm is provided to allow mobile devices in the WLAN to hand-off to another different access point quickly and efficiently. Once associated with an access point (AP), the mobile device receives information about neighboring APs that may be available for hand-off during roaming (or insufficient signal strength). Signal strength of the associated AP is continuously monitored and if signal strength from the associated AP falls below a threshold, the mobile device measures signal strength of the neighboring APs in the list, ranks them, and selects an AP for hand-off. AP load and other information may be used to rank the neighboring APs. The mobile device hands-off to (or associates with) one of the neighboring APs, if appropriate. Hand-offs are attempted in order or rank. Cell sizes in the pico cell WLAN are relatively small, on the order of 1000 square feet or less.

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